



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,487	01/09/2002	Kazuyasu Tanaka	FQ-IP217004	2865
21254	7590	11/29/2005	EXAMINER	
MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			LIOU, JONATHAN	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/040,487

Applicant(s)

TANAKA ET AL.

Examiner

Jonathan Liou

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 January 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☒ Claim(s) 11-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/09/2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
2. As per claim 22, Applicant claims a first and second media converters and further claims the first media converter comprises a packet buffer for storing a received packet, wherein a missing link function to keep a link. However, a missing link is not directly related to claim invention regarding to a first and second media converter and a link is not really clear defined either. Therefore, the examiner could not understand how a missing link function is directly related to the claimed invention.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2663

4. Claim 22 is rejected under 35 U.S.C. 102(e) as being anticipated by Ethridage et al. (US Pat No. 6,466,572.)

5. Ethridage et al. teaches a first media converter installed in a subscriber house (optical channel shelf 54), a second media converter installed in a switching office (Optical network unit 56), and both are connected by optical fiber cable (See Fib. 5.) Ethridage et al. also teach packet buffer and collision avoidance algorithm (See col 9, lines 25-32, Ethridage et al.)

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakaishi (US Pat. 6,810,212.), in view of Naidoo et al. (US Pat. 6,594,228.)

8. As per claims 11-12, and 16 Nakaishi disclosed a media converter for converting from one type of media to another (User Network 100 and Optical access network 200 could be the first and second communication point. Fig. 5 and 6, Nakaishi) comprising:

a first physical-layer interface to a first transmission medium; (13b to optical access network, Fig. 5, Nakaishi.)

a second physical-layer interface to a second transmission medium; (13a to user terminal 50, Fig. 5, Nakaishi.)

a first and second memory /packet buffer connected between the first and second physical-layer interfaces, for temporarily storing data to be transferred between the first and second physical-layer interfaces; (9 and 10 acts as buffer memory connected between first and second transmission reception circuit interface. Fig. 5, Nakaishi); and

Nakaishi does not teach when one link is disconnected; another link would keep connection state for transmitting/receiving. Nakaishi teaches a controller to monitoring and controlling the link activity (See col 4, lines 59-63, Nakaishi.) However, Naidoo et al. teach when a link on one of the first and second physical-layer interfaces is disconnected, another link on the other one of the first and second physical-layer interfaces is kept in a connection state (See col 5, lines 34-48, Naidoo et al.) and Nakaishi teaches data received through the other link is stored in the second memory (Nakaishi teaches the output received link is stored in the second reception buffer 10. See Fig. 2, Nakaishi.) In general, the communication system, while the disconnection on one link, the standby system would provide another link to transmit the data and stored, such as telephone transmitting and data traffic system. Since Nakaishi teaches a controller to perform the media converting and Naidoo et al. teach the disconnection link and backup link, it would have been obvious to one who have ordinary skill in the art at the time the invention was made to make sure one port is disconnected and the other port still can transmit the data to store in the buffer for later transmission because it would make sure no lost data would occur.

9. As per claims 13, Nakaishi teach the interfaces could connect to a personal computer (See col 2, lines 7, Nakaishi.), and personal computer would be often conforming to IEEE802.3 standards.

10. As per claims 14-15, and 17-18, Nakaishi shows acquire one physical-layer information to the other one also through memory buffer system (See Fig. 2, Nakaishi.)

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barraud (US Pat No. 6,088,051), in view of Crayford (US Pat No. 5,673,254.)

12. As per claim 19, Barraud teaches a plurality of media converters on one link for transmitting (See Fig. 3, Barraud.) Barraud does not teach a packet buffer for storing a received packet, which having collision domains for each end device. However, Crayford teaches a media converter having packet buffer for storing a received packet (See col 2, lines 30-37, and col 9, lines 31-47, Crayford.), and teach multiple collision domains for each end device (See col 4, lines 17-25, Crayford.) Since Barraud teaches a plurality of converters in a link and Crayford teach the packet buffer in each media converter, it would have been obvious to one have ordinary skill in the art at the time the invention was made to include collision domains into the packet buffer into Barraud structure because this would reduce congestion of network traffic.

13. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barraud (US Pat No. 6,088,051), in view of Crayford (US Pat No. 5,673,254.), and further in view of Naidoo et al. (US Pat. 6,594,228.)

14. As per claims 20-21, Barraud, in view of Crayford teach the transmission system according to claim 19, and stored the received packet. Their system does not

Art Unit: 2663

specifically teach when a link on one port is disconnected or collision domain is disconnected, and the other port is kept in a connection state for transmitting and receiving. Nevertheless, Naidoo et al. teach when a link on one of the first and second physical-layer interfaces is disconnected, another link on the other one of the first and second physical-layer interfaces is kept in a connection state (See col 5, lines 34-48, Naidoo et al.) Since Barraud, in view of Crayford teach a controller to perform the media converting and collision domains and Naidoo et al. teach the disconnection link and backup link, it would have been obvious to one who have ordinary skill in the art at the time the invention was made to make sure one port is disconnected and the other port still can transmit the data to store in the buffer for later transmission because it would make sure no lost data would occur.

***Allowable Subject Matter***

15. Claims 1-10 are allowed.

16. The following is a statement of reasons for the indication of allowable subject matter:

Regarding Claims 1 and 10, the cited prior art teach physical-layers, a memory and a media converter. However, none of prior arts teaches or suggest the test manager to combine with media controller in order to perform the limitation recited in the claim 1.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Liou whose telephone number is 571-272-8136. The examiner can normally be reached on 8:00AM - 5:00PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jonathan Liou

11/22/2005



RICKY Q. NGO  
SUPERVISORY PATENT EXAMINER